

Ministry of Agriculture and Forestry

Pipfruit Monitoring Report

A short-term financial and physical forecast
reflecting grower, consultant and industry perceptions
of pipfruit trends and issues, production and financial figures
in Hawke's Bay and Nelson

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Te Manatu Ahuwhenua,
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Foreword

Monitoring is a process whereby MAF Policy monitors the production and financial status of farms and orchards in terms of cash income and expenditure. Trends, issues and sector concerns are also monitored. The information for the models has been contracted in by MAF.

The report discussed within reflects growers' expectations and intentions, and the thoughts of those servicing the sector. They are not MAF price or production predictions.

The model orchards depicted in this report are representative of their orchard type within the region. They are based on the average orchard in a statistical sense for the regions. However, they have been adjusted to represent real orchards.

From time to time the models are revisited. This results in some changes, and caution should be taken in comparing between years.

Information for each model is drawn from 20 orchardists, and discussions with a wide cross-section of agribusiness.

The aim of each model is to best typify an average orchard for the region. Budget figures are therefore indicative of the average levels of income and expenditure, management, orchard production, debt and expenditure on development and capital purchases. Drawings are averaged from the contributing orchards, as are off-orchard income, new borrowing, other cash income and lease costs.

Monitoring is being continually improved to better accommodate the needs of the users of the reports.

The economic orchard surplus (EOS) depicted in the model budgets is calculated as follows:

Gross orchard revenue + change in value of stock on hand - working expenses (excluding interest, rent and lease costs) - depreciation - wages of management (WOM).

Wages of management are calculated as follows:

\$31,000 allowance for labour input + 1% of total capital as managerial reward. An upper limit for WOM of \$75,000 has been set.

Contents

Page

Sector Overview..... 1

Hawke’s Bay Pipfruit..... 2

 Physical Factors 2

 Financial Factors 5

 Issues and Trends 7

 Hawke’s Bay Pipfruit Budget 10

 Hawke’s Bay Pipfruit Budget 11

 Hawke’s Bay Pipfruit Production and Income Details 12

Nelson Pipfruit..... 13

 Physical Factors 13

 Financial Factors 15

 Issues and Trends 18

 Nelson Pipfruit Budget 20

 Nelson Pipfruit Budget 21

 Nelson Pipfruit Production and Income Details..... 22

Sector Overview

The 2003 season was another successful year for the pipfruit industry. Despite a significant rise in the New Zealand dollar/United States dollar (NZD/USD) exchange rate, grower returns per export carton decreased only slightly (by around \$1.00 per carton) due to favourable market conditions.

Grower confidence continues to be high with significant spending occurring on orchard development and capital purchases. However, orchard development is being constrained by a lack of suitable nursery stock in both Hawke's Bay and Nelson. Industry confidence has also resulted in significant increases in orchard land value.

The value of New Zealand's pipfruit exports amounted to \$380 million for the year ended March 2003.

The continued appreciation of the NZD is the biggest issue potentially affecting returns in 2004. Despite this, pipfruit growers are forecasting a favourable 2004 season due to increased production arising from good growing conditions.

It is forecast that approximately 20 million cartons will be exported in 2004. The highest volume of exports from New Zealand to date was 18.6 million cartons for the year ended March 2000.

Despite the appreciating exchange rate and increased national exports, growers in Hawke's Bay are only predicting a decrease in export returns of around \$1.00 per carton in 2004 while Nelson growers are predicting similar returns to the previous season. Growers consider that improved fruit size and quality will offset the effect of an increased exchange rate. Several industry commentators are forecasting greater decreases in export returns due to the exchange rate. MAF apple forecasts predict a \$2.61 decrease in export returns to growers after FAS costs for the 2004 season (year ending March 2005).

Orchard Prices for Apple Exports

Product	Year ending	2002	2003	2004e	2005f
Apples (\$/18 kg carton) ¹	September	11.72	14.31	12.15	9.54

e = effective; f = forecast

¹FAS less packaging, packing and storage

Hawke's Bay Pipfruit

Model Description

Hawke's Bay is the largest pipfruit-producing district in New Zealand, exporting 50% of the country's pipfruit crop. Most orchards have a mixture of pipfruit varieties and are run by owner-operators.

The model orchard covers 15 planted hectares (ha) consisting of 11.5 ha owned and 3.5 ha leased. In previous years it was assumed that 100% of the model orchard was owned. This change reflects the current situation in the pipfruit industry.

Note: *This report has been prepared using a 31 December balance date, whereas previous reports used a 30 June balance date. The previous system made year-to-year financial comparisons difficult.*

Table 1: Key Parameters

	1999/2000	2000/01	2001/02	2002	2003	2004f
Area available for pipfruit (ha)	13.0	15.0	15.0	18.8	18.8	18.8
Planted area (ha)	9.2	12.0	12.0	15.0	15.0	15.0
Total TCE	28,151	31,497	36,844	45,528	45,200	47,636
Export TCE	17,252	19,604	24,056	32,073	32,422	33,988
Weighted average price (\$/TCE)	11.11	11.61	12.30	16.38	15.9	14.9
Cash orchard revenue (\$)	223,914	378,294	422,741	748,264	721,455	716,730
Cash orchard surplus (\$)	-20,246	3,610	27,076	210,504	140,997	97,680
Cash disposable profit (\$)	-69,686	-47,047	-16,355	71,094	-31,195	-21,495

Key Points

- The 2003 year was another good year for the pipfruit industry with an average crop able to be sold at profitable grower returns.
- The demand for New Zealand apples continues to be strong due to poor Northern Hemisphere crops.
- The appreciating exchange rate is the biggest single issue facing New Zealand growers. Returns in 2004 are forecast to continue to decrease due to this single factor alone.
- The 2003/04 growing season was above average with good heat and rainfall at regular intervals. Fruit volume, size and quality are all expected to be above average in 2004.
- National export volumes are predicted to achieve a record 20.6 million cartons in 2004.

Physical Factors

Climate 2002/03

The climate for the 2002/03 growing season was characterised by an abnormally warm September with above average rainfall followed by cold conditions in October, November and January. December temperatures were average. October and December received average rainfall while January was very dry.

A series of damaging frosts occurred between late-September and mid-October, with a particularly damaging frost on the morning of 5 October 2002. This frost caused severe damage to fruit-set on earlier flowering varieties where frost protection was inadequate. Among the various apple varieties, Braeburn was most affected, with many growers reporting large reductions in the crop for the 2002/03 season. Later flowering varieties compensated for the frost losses by setting heavily on lateral bud of one-year wood.

Chemical thinners performed poorly on this type of wood and low temperatures over the chemical thinning period further reduced their effectiveness, leading to a 14% increase in hand thinning costs per hectare.

Lateral bud, one year wood fruit does not size well and, with the additional impact of lower than average temperatures over the critical cell division period, this made 2002/03 a small fruit size year.

Cooler temperatures over summer led to less sunburn damage than usual.

Weather conditions through harvest were good, giving a smooth harvest with higher than average packouts. Spring frosts caused severe damage to competing summerfruit crops, leading to strong local market returns for early apples.

Applications of Kaolin based sunburn-protecting sprays caused some packing issues due to the difficulty of removing its residue from the fruit in the packing line.

Climate 2003/04

Autumn 2003 was mild and these conditions continued into the early part of the winter. July and August were colder than recent years resulting in a better level of winter chilling. Cold late winter temperatures improved ovule longevity and this subsequently led to very heavy fruit set.

The warm September allowed rapid and strong bud break. October was cool, November slightly below average and December and January considerably warmer than average, to give heat units over the September to January period 8% above the long-term average. Spring growing conditions were perhaps better than the growing degree-day (GDD) data suggests. For the critical cell division period, following blossom, the nights were cool and day temperatures warm and sunny giving ideal conditions for apple fruit-let development. Consequently, this year Hawke's Bay apples are much longer in size and more "crowned" than normal.

September and December received four times their average rainfall while October, November and January received normal rainfall. This resulted in total rainfall for the period between September and January being 80% above the long-term average for the same period.

Much of December and January was cloudy and humid leading to warm nights and only moderately hot days. By the end of January sunburn problems were less than usual. However, fruit colour development lagged behind other maturity parameters. This warm, cloudy weather continued into February.

Some blocks showed signs of water logging in spring and as a result fruit set for these areas was not as good as expected. However, generally ideal fruit set conditions during October and November resulted in very heavy fruit set.

Orchards affected by frost in 2002 had the potential to produce very heavy "on" crops this year. Although these orchards were aggressively thinned with chemicals, fruit set was still heavy, leading to increased hand thinning costs estimated to be up 5% on last season.

Hailstorms have caused very little loss, to date, this season. Several cold nights in early October caused damage in low-lying areas without frost protection, resulting in russet occurring rather than big losses of fruit.

The wet, early spring allowed black spot to become established on some orchards.

The relatively cold spring and warm, early summer has favoured the establishment of mites and woolly apple aphid (WAA) with many orchards needing insecticide application for these pests, even though in the case of WAA there were high predator populations.

The wet summer favoured young orchard establishment with newly planted blocks showing good tree establishment and growth.

Table 2: Hawke's Bay Weather Data

	2002/03 mm rain	2003/04 mm rain	Average mm rain	2002/03 (GDD)	2003/03 (GDD)	Average (GDD)
September	53	133	32	107	97	49
October	23	26	24	98	92	110
November	54	56	61	129	138	147
December	27	78	25	229	244	225
January 2004	12	60	56	227	275	254
Total	169	353	198	790	846	785

Source: HortPlus (Whakatu weather station)

Production

Since industry deregulation, accurate areas and production data have been difficult to obtain. In the absence of industry wide data, several data sources have been combined to produce estimates for this report.

2003

Model orchard production in 2003 was very similar to the previous year with slight reductions in Braeburn, Fuji, Pink Lady and Pacific Beauty being balanced by increases in Royal Gala, Pacific Rose and Pacific Queen.

Hawke's Bay regional estimates for the 2001/02 export crop show Royal Gala up 7% and Braeburn down 10%. Respective figures for the MAF model were 10% and 6% indicating the drop in Braeburn export production for the model orchard was less than for the region as a whole, but the lift in Royal Gala was a little more.

Average fruit size of Royal Gala was estimated to be 127, down from 112 in 2001/02 and the smallest for many years, as a result of the cooler growing season and increased crop loads. The small fruit size was a factor in the reduced FAS return for Royal Gala, which fell from \$23.85 in 2001/02 to \$21.42 in 2003.

Fruit finish and colour were above average for this crop resulting in an overall packout lift of 2%, to 72%.

2004

Model orchard export production is forecast to increase by 5%. Pacific Beauty is forecast to increase 83% due to its plantings beginning to approach mature orchard production levels. Braeburn, Pacific Rose and Pink Lady are all expected to increase by 12%, while Fuji is forecast to increase by 9%. Royal Gala is forecast to decrease by 4%, and Pacific Queen by 5%.

Regional estimates indicate the Braeburn export crop will increase by 32% on 2003's crop, assuming similar average packouts to 2003. Regional production of Royal Gala is estimated to be down about 6%.

To date, the growing season has been favourable and growers are forecasting similar packouts to the previous year.

Royal Gala fruit size is forecast to be larger than the previous year even though early season heat units were similar. Big price differentials in favour of large fruit size in this variety have caused growers to thin harder and reduce crop loads to increase fruit size at harvest. The requirements for larger fruit size, and concerns about harvest labour, have increased the use of Retain® which delays harvest by between 7 and 14 days, and can increase average fruit size by between 1 and 2 mm.

The heavy Braeburn crop load may reduce average fruit size and also delay harvest.

The Pacific Rose leaf necrosis problem is much more severe this season, indicating that when long periods of warm cloudy weather occur which favours its expression, the zinc nutrition programme is unable to control the disorder.

District pear crops are heavy due to the very light crops in 2003.

Table 3: National and Hawke's Bay Export Pipfruit Crop (million cartons)

Year	National Crop	Hawke's Bay Crop
1999	17.7	8.9
2000	19.8	10.3
2001	14.5	7.7
2002	18.5	9.5
2003	18.1	9.2

Source: NZ Pipfruit

Financial Factors

2003 Review

Revenue

Gross orchard revenue for the model orchard in 2003 was \$721,500, down 4% on 2002. Export production was 32,400 tray carton equivalents (TCE's), slightly up on 2002. The decline in gross revenue is due to a decrease in average export returns from \$22.14/TCE to \$21.17/TCE (see table 4). The lower export return was primarily due to a stronger NZD/USD and smaller fruit size, particularly for Royal Gala. Although revenue is down in comparison to 2002, it is still good in comparison to the previous five-year average (see table 4).

Despite the average export return being down approximately \$1.00/TCE, Braeburn achieved its best return for years at \$20.08/TCE. This was due to a strong market for this variety and a generally smaller New Zealand crop due to frost in Hawke's Bay and hail in Nelson.

Table 4: Average FAS Export Returns (\$/TCE)

Variety	1999	2000	2001	2002	2003
Braeburn	12.70	14.95	18.39	18.00	20.08
Granny Smith	12.06	27.60	23.19	20.88	20.37
Royal Gala	18.04	15.55	19.69	23.85	21.42
Fuji	19.61	20.91	23.65	27.79	24.72
Pacific Rose	16.82	19.71	20.96	22.16	17.82
Pink Lady	25.75	19.97	25.25	28.74	26.99
Total apples	15.96	16.30	19.75	22.14	21.17

Source: ENZA

Expenditure

Cash orchard expenditure increased in 2003 to \$551,583, or \$17.01/export carton. This is an increase on 2002 on a per hectare and per carton basis. The major increases have occurred in wages and post harvest costs. Operating and administration costs have remained stable.

Orchard wages have increased by 10% to \$150,469 (up \$4.64/export TCE). All wage categories have increased, i.e., pruning, thinning, and harvesting, reflecting the increases in rates that are being paid to attract orchard staff. With general labour shortages, the costs of labour have increased.

Post harvest costs have increased by 7% to \$289,559, or \$8.93/export carton. Packing and packaging costs both increased, while coolstorage and freight remained stable. Packhouses lifted their charges to

process a 400 kg bin to approximately \$55.00, as their costs of labour and capital also increased. Packaging increases came from the cardboard manufacturers and have been passed onto growers at cost.

Net Result

2003 delivered a satisfactory net result with the model achieving a net trading profit of \$120,087. Although this is down on the \$173,784 achieved in 2002, it is still well above the average of the last five years.

With increased profitability in 2002 and 2003, taxation payments have increased dramatically from \$17,190 to \$52,908. Growers have also increased their spending on drawings (up 19%), and capital purchases (up 48%). Development expenditure remains constant and principal repayments, although significant, have declined from 2002.

Off-orchard income and other cash income are both down significantly from \$54,948 in 2002 to \$29,310 in 2003. The high figures in 2002 were primarily due to sales of ENZA shares, which was a one-off sale. It would also appear that spouses are working less off-orchard as orchard profitability increases.

2004 Forecast

Revenue

In 2004, the Hawke's Bay pipfruit model is forecasting a large crop of nearly 34,000 export cartons, an increase of 5% on 2003. This is equivalent to 2,266 export cartons/planted hectare. Fruit size will also be larger than 2003, which would normally result in better export returns.

However, the model orchard panellists are forecasting a drop in export returns of 5% from \$21.17 to \$20.03/export carton on average. This reduction is due to the appreciating exchange rate, as demand for the fruit is strong and in-market returns are expected to remain good (see table 5).

Northern Hemisphere carry-over stocks are lower than in 2003 and their fruit quality is low due to a heat wave during their 2003 harvest.

Table 5: Foreign Exchange Rates

	2003 Selling Season Average	February 2004	% Increase
NZD/USD	0.58	0.68	17.2
NZD/EUR	0.51	0.54	5.9
NZD/GBP	0.35	0.36	2.9

Source: National Bank NZ

Expenditure

Cash orchard expenditure is forecast to increase again in 2004 to \$588,000 (\$39,000/ha and \$17.30/export carton), an increase of 7% on 2003. This is partly due to cost increases associated with higher production, together with increases in packing (from \$3.27 to \$3.42/export carton), packaging (from \$3.63 to \$3.75/export carton) and cool storage (from \$1.78 to \$1.90/export carton).

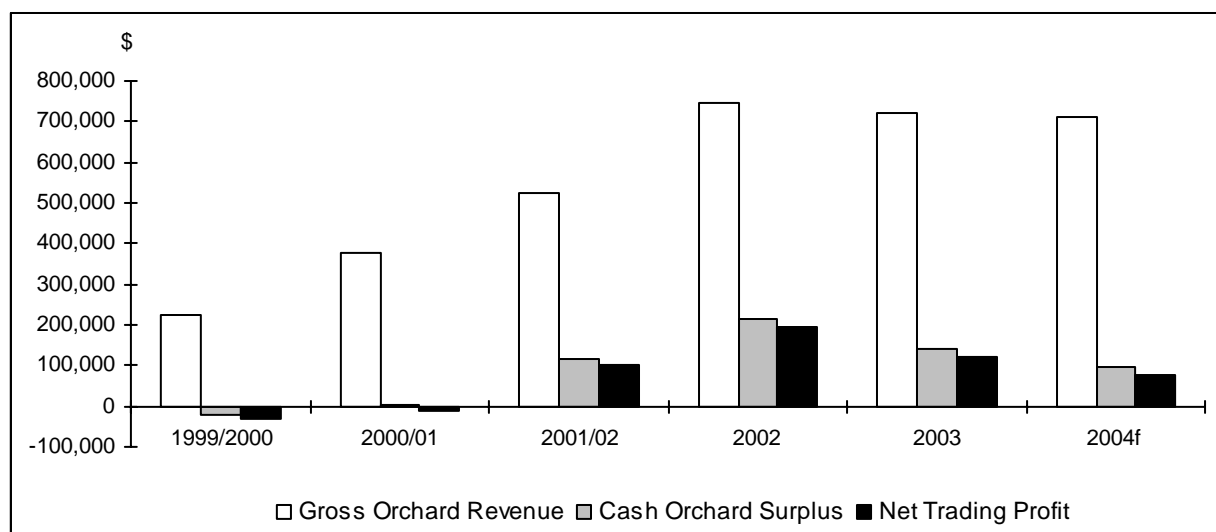
All other costs are forecast to remain stable.

Net Result

Net trading profit is forecast to be \$76,000 in 2004, only 11% of gross orchard revenue. This is significantly below the net trading profits that have been achieved in the previous two years.

With allowance for drawings, principal repayments, and development and capital, the orchard is projected to have a disposable deficit of \$21,000. However, off-orchard income will balance that position to achieve a positive net cash change of \$6,000.

Hawke's Bay Pipfruit Profitability Trends



Issues and Trends

The good pipfruit returns experienced over the last two seasons have restored confidence in the industry. The decline in pipfruit planted areas experienced over the period 1998 to 2002, when Hawke's Bay planted areas fell from 7,950 ha to 6,200 ha, has now ceased.

Orchard and bare land values have both increased in the last 18 months, from \$40,000 to \$50,000/ha for bare land, and from \$45,000 up to \$80,000/ha for planted pipfruit orchards. The industry is now in expansion mode. At present, a shortage of nursery trees is the limiting factor for expansion.

The high orchard prices are seen by some older growers as an opportunity to exit the industry on favourable terms. Often these properties are purchased by adjacent pipfruit growers who then amalgamate the titles clearing the way for surplus buildings to be subdivided off and sold. The effect of this is to reduce the level of over-capitalisation in the industry caused by owning dwellings no longer required by the orchard business.

There is a marked trend towards intensive planting on dwarfing rootstocks at densities approximately two to three times the semi-intensive tree densities that were the norm in the past. This increased tree density is having a marked impact on the demand for apple trees. Varieties being planted are Royal Gala, Granny Smith, Fuji and Jazz™, Pink Lady and process pears. There is also renewed interest in planting Braeburn.

Some growers are expressing concern about the increasing volume and polarisation of production towards Royal Gala. With the poor performance of the Pacific series, and untested nature of newer varieties such as Jazz™ and Tentation™, planting these varieties is high risk, so risk averse growers are planting Royal Gala, Fuji, Granny Smith and Braeburn.

Growers continue to be disappointed with the performance of the Pacific series varieties. These suffer from low and erratic yield, russet, storage problems, handling difficulties, and are not receiving sufficient returns to compensate producers for these production difficulties. A number of blocks of Pacific Rose, in particular, have been removed.

The industry has now completed two selling seasons under deregulated export market conditions. To date, pipfruit growers view the deregulated market positively in that it offers freedom of choice and the opportunity to explore "niche" markets that were unavailable to them prior to deregulation.

Competition among exporters for supply, and among on-shore logistics companies, has improved grower returns. Comparison of export packouts among the model orchard panellists for the last four

years shows that the export content of their crops has increased from 61-62% to 70-72% after deregulation.

It should be noted that, to date, export market conditions for pipfruit have been favourable due to Northern Hemisphere under-supply, and a relatively weak but rising NZD/USD exchange rate. Deregulation is yet to be tested under adverse marketing conditions.

Pipfruit growers also continue to express a number of concerns about the deregulated market. These include:

- lack of industry cohesion and market co-ordination;
- too many exporters with risk of weak selling due to competition among them;
- weakening of quality standards for New Zealand fruit, tarnishing its image abroad; and
- market access issues through poor co-ordination and phytosanitary procedures among exporters.

Pipfruit growers were generally satisfied with the performance of their exporters and are likely to remain loyal to them, apart from shifts towards better performances for “niche” varieties such as the Pacific series, or small fruit. The move away from ENZA has now almost ceased, with ENZA continuing to market around 42% of the crop, which is a similar level to 2001/02 season. Indications for the 2003/04 season suggest a tendency away from rather than towards ENZA in regard to the proportion of the crop a particular grower may supply.

The rising NZD/USD exchange rate is by far the most important issue impacting on grower returns in the immediate future. The strong export market and rise of European currencies against the USD will cushion some of the effect because freight costs are paid in USD, so relative to market price will fall for fruit sold in non-USD trading markets. Returns for fruit sold in USD in markets such as the US, and most of Asia will suffer much greater loss of returns from the high NZD/USD. Diversion of fruit away from these markets to those with stronger currencies could disrupt orderly marketing in those markets, as well as destroy customer confidence in areas that lose access to supply.

Increasing government costs and taxes are of real concern to fruit growers. Many of these are viewed as an unnecessary burden on small orchard businesses. Other issues involving the government include visa policies in regard to overseas worker work permits. Many in the industry consider the work ethic of these people to be superior to those of the New Zealand unemployed. There is a growing realisation that this industry relies on the availability of overseas visitors to harvest and pack the crop.

Pipfruit production is labour intensive. Access to a satisfactory labour pool is a major problem for the industry. There is still a shortage within the industry particularly in regard to permanent staff and middle management. Seasonal staff are becoming more difficult to obtain and often lack motivation and a satisfactory work ethic. This is a big problem for both hand thinning and harvest.

Phytosanitary issues and market access, including food safety certification, are areas where continuing government support is viewed as necessary. EurepGap™ and other compliance costs are seen as adding bureaucratic burden to the pipfruit industry in its present fragmented marketing climate. Administration of such schemes is adding to the overheads having to be carried by pipfruit growers.

Increased overheads and rising costs beyond grower control continue to squeeze margins. Growers with long-term commitment to the industry are responding by expanding their production base by either leasing established orchard, long term leasing of bare land for orchard development, or purchasing established orchards or land. These growers are also embarking on orchard redevelopment to replace lower performing varieties such as the Pacific series, older poorly coloured Royal Gala, pears or summerfruit with modern intensively planted apple orchards.

Smaller pipfruit growers are expressing concern about the shift in voting power within the industry towards corporate and larger growers as larger operators continue to expand.

Growers are becoming concerned about the impact China may have on their markets, and also how new technologies such as “Smartfresh™” may affect them. Smartfresh™ is a chemical that slows the maturation process giving longer storage life, and Northern Hemisphere growers the ability to market fruit into the traditional New Zealand market window.

Hawke's Bay Pipfruit Budget

	2003				2004f			
	Whole orchard	\$ per planted ha	per TCE gross	per TCE export	Whole orchard	\$ per planted ha	per TCE gross	per TCE export
Revenue								
Gross pipfruit income	718,815	47,921	15.90	22.17	712,455	47,497	14.96	20.96
Other orchard income	2,640	176	0.06	0.08	4,275	285	0.09	0.13
Gross orchard revenue	721,455	48,097	15.96	22.25	716,730	47,782	15.05	21.09
Cash orchard expenditure								
Interest	13,830	922	0.31	0.43	17,426	1,162	0.37	0.51
Rent and/or lease	15,045	1,003	0.33	0.46	13,665	911	0.29	0.40
Cash orchard surplus	140,997	9,400	3.12	4.35	97,680	6,512	2.05	2.87
Depreciation	20,910	1,394	0.46	0.64	21,300	1,420	0.45	0.63
Net trading profit	120,087	8,006	2.66	3.70	76,380	5,092	1.60	2.25
Taxation	52,908	3,527	1.17	1.63	15,955	1,064	0.33	0.47
Net trading profit after tax	67,179	4,479	1.49	2.07	60,425	4,028	1.27	1.78
Allocation of Funds								
Add back depreciation	20,910	1,394	0.46	0.64	21,300	1,420	0.45	0.63
Drawings	57,229	3,815	1.27	1.77	47,580	3,172	1.00	1.40
Principal repayments	21,810	1,454	0.48	0.67	9,120	608	0.19	0.27
Development	10,275	685	0.23	0.32	20,000	1,333	0.42	0.59
Capital purchases	29,970	1,998	0.66	0.92	26,520	1,768	0.56	0.78
Disposable surplus/deficit	-31,195	-2,080	-0.69	-0.96	-21,495	-1,433	-0.45	-0.63
Other Cash Sources								
Off-orchard income	19,125	1,275	0.42	0.59	18,585	1,239	0.39	0.55
Other cash income	10,185	679	0.23	0.31	8,685	579	0.18	0.26
Net cash change	-1,885	-126	-0.04	-0.06	5,775	385	0.12	0.17
Assets and Liabilities								
Land and building (opening)*	1,021,845	88,856	22.61	31.52	1,138,545	99,004	23.90	33.50
Plant and machinery (opening)	66,645	4,443	1.47	2.06	72,525	4,835	1.52	2.13
Total orchard capital	1,088,490	72,566	24.08	33.57	1,211,070	80,738	25.42	35.63
Total debt opening	192,291	12,819	4.25	5.93	198,572	13,238	4.17	5.84
Equity (orchard assets-liabilities)	896,199	59,747	19.83	27.64	1,012,498	67,500	21.25	29.79

* Land and building value does not include value of leased land. Therefore, per hectare value is: total value/area of owned land.

Hawke's Bay Pipfruit Budget

	2003				2004f			
	Whole orchard	\$ per planted ha	per TCE gross	per TCE export	Whole orchard	\$ per planted ha	per TCE gross	per TCE export
Orchard Working Expenses								
Wages								
Pruning	21,720	1,448	0.48	0.67	21,345	1,423	0.45	0.63
Thinning	31,695	2,113	0.70	0.98	33,300	2,220	0.70	0.98
Harvesting	79,099	5,273	1.75	2.44	85,269	5,685	1.79	2.51
Other	15,075	1,005	0.33	0.46	17,985	1,199	0.38	0.53
ACC	2,880	192	0.06	0.09	3,705	247	0.08	0.11
	150,469	10,031	3.33	4.64	161,604	10,774	3.39	4.75
Post-harvest costs								
Packing	106,019	7,068	2.35	3.27	116,124	7,742	2.44	3.42
Packaging	117,692	7,846	2.60	3.63	127,395	8,493	2.67	3.75
Coolstorage	57,711	3,847	1.28	1.78	64,551	4,303	1.36	1.90
Freight	8,136	542	0.18	0.25	8,575	572	0.18	0.25
	289,559	19,304	6.41	8.93	316,645	21,110	6.65	9.32
Operating costs								
Spray and chemicals	35,280	2,352	0.78	1.09	36,090	2,406	0.76	1.06
Pollination	1,095	73	0.02	0.03	1,200	80	0.03	0.04
Fertiliser	3,990	266	0.09	0.12	3,930	262	0.08	0.12
Electricity	2,730	182	0.06	0.08	2,925	195	0.06	0.09
Sundry expenses	6,885	459	0.15	0.21	6,420	428	0.13	0.19
Vehicles	14,685	979	0.32	0.45	14,100	940	0.30	0.41
Repairs and maintenance	10,785	719	0.24	0.33	9,600	640	0.20	0.28
	75,450	5,030	1.67	2.33	74,265	4,951	1.56	2.19
Administration and property expenses								
Communication	3,120	208	0.07	0.10	2,910	194	0.06	0.09
Rates	4,590	306	0.10	0.14	4,815	321	0.10	0.14
Accountancy, consultancy, legal	5,415	361	0.12	0.17	5,400	360	0.11	0.16
General insurance	3,060	204	0.07	0.09	3,135	209	0.07	0.09
Crop insurance	10,995	733	0.24	0.34	9,690	646	0.20	0.29
Levies and compliance	5,820	388	0.13	0.18	6,435	429	0.14	0.19
Other	3,105	207	0.07	0.10	3,060	204	0.06	0.09
	36,105	2,407	0.80	1.11	35,445	2,363	0.74	1.04
Cash orchard expenditure	551,583	36,772	12.20	17.01	587,959	39,197	12.34	17.30
Calculated Ratios								
Economic orchard surplus (or EBIT)	107,077	7,138	2.37	3.30	64,360	4,291	1.35	1.89
Cash orchard expenditure/GOR	76%				82%			
EOS/total orchard capital	9.8%				5.3%			
EOS less interest & lease/equity	8.7%				3.3%			
Interest+rent+lease/GOR	4.0%				4.3%			
EOS/GOR	14.8%				9.0%			
Economic orchard surplus (EOS) is calculated as follows:								
Gross revenue-cash orchard expenditure-depreciation-wages of management.								
Wages of management = \$31,000 + 1% of opening total orchard capital to a maximum of \$75,000								

Hawke's Bay Pipfruit Production and Income Details

	2003							Revenue (\$)
	Area (ha)	Yield/ha (TCE/ha)	Gross yield (TCE)	Export packout (%)	Total export cartons	Export return (\$/TCE)	Non export return (\$/TCE)	
Variety								
Braeburn	4.13	3638	15,007	74	11,045	20.08	0.97	225,626
Fuji	1.80	2869	5,164	68	3,515	24.72	1.16	88,810
Granny Smith	0.38	3219	1,207	60	729	20.37	2.09	15,851
Pacific Beauty	0.75	791	593	60	354	22.78	1.24	8,356
Pacific Queen	0.60	2158	1,295	65	843	19.27	1.06	16,731
Pacific Beauty	1.80	2511	4,520	41	1,843	17.82	7.94	54,093
Pink Lady	0.38	2704	1,014	71	716	26.99	0.96	19,605
Royal Gala	5.18	3169	16,400	82	13,377	21.42	1.06	289,742
Vacant plantable area	0.00							
Total area available for pipfruit	15.00		45,200	72	32,422	21.17	2.53	718,815

	2004f							Revenue (\$)
	Area (ha)	Yield/ha (TCE/ha)	Gross yield (TCE)	Export packout (%)	Total export cartons	Export return (\$/TCE)	Non export return (\$/TCE)	
Variety								
Braeburn	4.13	4079	16,826	76	12,788	18.16	1.45	238,079
Fuji	1.80	3146	5,663	69	3,893	23.84	1.32	95,149
Granny Smith	0.38	2981	1,118	65	721	19.58	0.98	14,507
Pacific Beauty	0.75	1167	875	50	438	20.87	0.86	9,510
Pacific Queen	0.60	2374	1,424	65	926	18.07	1.01	17,234
Pacific Rose	1.80	2606	4,691	41	1,920	19.58	6.03	54,307
Pink Lady	0.38	3031	1,137	65	739	24.47	0.58	18,309
Royal Gala	5.18	3073	15,903	79	12,563	20.71	1.55	265,360
Vacant plantable area	0.00							
Total area available for pipfruit	15.00		47,636	71	33,988	20.03	2.31	712,455

Nelson Pipfruit

Model Description

Nelson is the second largest apple district in New Zealand after Hawke's Bay. Most orchards are a mixture of old and new varieties, typically run by owner-operators. Local market fruit is not significant, although larger growers are beginning to supply major brands to this market. Fruit is generally packed off the orchard on contract by a packhouse that packs for two to three growers.

The model orchard size has remained at 14.4 planted hectares since the last report. This is despite some growers no longer leasing land, others selling up and leaving the industry, and some actively buying more land and increasing their orchard size.

Note: *This report has been prepared using a 31 December balance date, whereas previous reports used a 30 June balance date. The previous system made year-to-year financial comparisons difficult.*

Table 1: Key Parameters

	1999/2000	2000/01	2001/02	2002	2003	2004f
Area available for pipfruit (ha)	18.5	18.5	18.5	18.5	18.5	18.5
Planted area (ha)	13.5	13.5	14.5	14.4	14.4	14.4
Total TCE	41,974	35,729	38,573	38,588	40,986	44,967
Export TCE	30,582	26,761	28,844	29,235	30,382	34,344
Weighted average price (\$/TCE)	9.62	12.99	16.40	16.4	15.48	15.62
Cash orchard revenue (\$)	415,944	467,183	707,276	642,000	651,353	715,079
Cash orchard surplus (\$)	-2,679	-21,242	235,841	140,723	100,484	130,162
Cash disposable profit (\$)	-85,269	-64,918	146,056	8,963	-14,489	3,899

Key Points

- 2003 continued the recent trend of sound grower profitability mainly due to better than anticipated Braeburn returns.
- Most growers considered the second year of deregulation successful. However, the increase in exporter numbers is affecting New Zealand's reputation. There are comments that New Zealand's premium over other Southern Hemisphere producers is being eroded by poor quality fruit reaching the market. This problem will not go away in the near future.
- Export returns continue to be eroded by the strengthening NZD/USD exchange rate. This is not forecast to improve in 2004.
- Nelson orchards carried out a high amount of orchard development in 2003 and are forecast to continue this trend. However, orchard development is being constrained by a lack of suitable nursery stock which is slowing new apple plantings.

Physical Factors

Climate 2002/03

Temperatures for the 2002/03 season, as measured by Growing Degree Days (GDD), were very close to the long-term average, while rainfall was 20% below average. The GDD for the months of September to January were 667 days, similar to the long-term average of 663 days (see table 2). However, October was 1.5 degrees cooler than average, reducing the effectiveness of chemical thinners.

Unlike other regions, Nelson was relatively unaffected by early season frosts. However, this was somewhat overshadowed by several large hailstorms that fell on 20% of the region. Areas in Waimea, Motueka, Tasman, Lower Moutere and Riwaka suffered significant hail damage, with Riwaka and parts of Motueka being worst affected. Both areas were hit by hailstorms on 16 and 17 November 2002. Some orchardists did not harvest any fruit in 2003 because of the severe hail damage, reducing production.

The region received 20% less rainfall than average between September 2002 and January 2003. This led to the introduction of water restrictions in the Waimea and the Moutere areas during February and March 2003. Water restrictions prior to harvest impacted on fruit size, particularly the later varieties, such as Braeburn, which were heavily laden.

The drier weather decreased the risk of Blackspot and most pests and diseases were satisfactorily controlled.

Climate 2003/04

No two years are alike, and although 2003 was close to average, the 2004 season appears likely to be better than average. GDD days from September to January were similar to 2002/03 and the long-term average. An unseasonably hot January increased the total GDD to 7% above the long-term average.

Rainfall of 531 mm, although close to the long-term average of 527 mm, is a little misleading. Most of this rain fell early in the season (September) when there was less demand for water from the trees. December and January received only 45% of their average monthly rainfall. This led to 20% water restrictions being implemented in Waimea. However, these restrictions were soon withdrawn due to heavy rain in late January and early February.

A series of late spring frosts, with the latest on 18 November, did not significantly affect the 2004 crop. Only one minor hailstorm fell in Richmond and clipped the edges of a few Waimea orchards. However, all orchards are expecting to complete a full harvest programme. Summer rots have appeared much earlier than in past seasons, most likely because of warmer growing conditions. A careful watch will be kept on these throughout harvest and into coolstore.

An unusually cloudy February with frequent rain will impact upon harvest in 2004. Fruit pressures are the lowest they have been for four years and this could translate into low apple crunch in the market. In 2003, ENZA had to sell 80,000 cartons of Cox for \$2.00 per TCE because of low pressures.

Table 2: Nelson Weather Data

	2002/03 (mm rain)	2003/04 (mm rain)	Average (mm rain)	2002/03 (GDD)	2003/04 (GDD)	Average (GDD)
September	147	206	130	53	44	33
October	81	121	116	77	83	84
November	54	113	114	126	124	118
December	73	33	90	198	198	194
January 2004	67	58	77	213	267	234
Total	422	531	527	667	716	663

Source: HortResearch (Riwaka site)

Production

Nelson produced an estimated 6.02 million TCE's of export pipfruit in 2003. Unfavourable climatic conditions did not halt the recent trend of improving production from Nelson. Over the past three years, production has continued to steadily improve from 5.30 million cartons produced in 2001 and 5.70 million cartons in 2002. However, production is down compared with the record year of 6.60 million cartons in 2000.

Braeburn

Braeburn is still Nelson's largest variety occupying 38% of the total planted area and 43% of total production. There were 2.67 million export cartons produced in 2003, 9% less than the previous year. Higher colour, red strains of Braeburn are now packed as standard Braeburn. Fruit size was smaller than previous years at a 104 average count size. However, this was the best crop for the markets as counts 100 to 110 were the best paying in 2003. Packouts were lower, at 74%, compared with the longer-term average of 76%. Hail and smaller fruit size contributed to these lower packouts.

Braeburn production is forecast to increase to 2.99 million cartons in 2004.

Royal Gala

Royal Gala is the second largest variety grown in Nelson (36%), with an estimated 2.16 million export cartons grown for export in 2003. Export packouts were higher at 82% than in 2002 (79%) due to smaller fruit size and good colour development. Royal Gala fruit size was smaller at an average count size of 123 compared with the 108-110 count size in 2002. This smaller fruit size was due to a combination of increased crop loads and dry climatic conditions over the harvest period for Royal Gala. February rainfall was 5 mm, while average rainfall for the same period is 80 mm, which affected fruit size. A cooler, later spring also reduced the effectiveness of chemical thinners and increased the amount of hand thinning required.

Royal Gala production is forecast to increase to 2.25 million cartons at an average count size of 113 in 2004.

Cox Orange Pippin

2003 was a much improved year of production for Nelson Cox. An estimated 440,000 export cartons were produced. Export packout of 67% was up 14% compared with the previous season. Cox volumes were up on 2003 due to cooler growing conditions that suit Cox better than other varieties. Cox fruit pressures in the lead up to harvest were the firmest fruit pressures experienced for many years. However, this increase in firmness did not hold up to the market place. Pressures declined at an alarming rate and this led to very low fruit pressures in the market for later arriving fruit. Approximately 80,000 cartons were sold below the cost of production on the wholesale market (\$2.00 per carton). The reasons for this unusually low fruit pressure are unknown. This collapse in price took the shine off what would have been a satisfactory year for Cox. As a consequence, more Cox trees have been removed in Nelson.

However, even with tree removals, Cox production is forecast to increase in 2004 to more than 500,000 export cartons at a forecast 130 count size. Packouts are also forecast to be above average.

Pears

Nelson is the largest pear-producing district in New Zealand, growing 80% of national production. However, 2003 continued the recent trend by being an off year for production with only 180,000 export cartons of pears being produced in Nelson. This was significantly lower than the 440,000 cartons produced in 2002. Biennial bearing is a major problem with all varieties of pears. Fruit size was bigger. However, the closure of some pear packhouses in Nelson led to fruit being coolstored longer before packing and this affected packouts. Packouts across the pear varieties averaged 59%, which were significantly lower than 79% in 2002.

Pear production in 2004 is forecast to increase to 313,000 export cartons.

Financial Factors

This report has been prepared using a 31 December balance date. The model orchard size has stayed the same at 15 planted hectares. This reflects that although some growers no longer lease land, others have sold up and left the industry, while others are actively buying more orchards and increasing their orchard size.

2003 Review

Revenue

Gross orchard revenue in 2003 was \$651,000, up \$9,000 (1%) on 2002. This increase was due to improved production even though export returns were lower.

Final average fruit returns in 2003 of \$20.33/export carton were \$0.93/export carton lower than 2002. Braeburn averaged \$19.83/export carton, a 6% increase from 2002 (up \$1.14), Royal Gala averaged \$20.79/export carton, a 10% decrease (down \$2.40), Cox averaged \$17.30/export carton, a decrease of 24% (down \$5.44) and pears averaged \$39.03 (up 15%). Cash flowing the harvest was easy again this year due to strong revenue flows and prompt payment by exporters.

Unlike 2002, there were no new borrowings in 2003. This was most likely because of the strong financial position orchards were in after the good 2002 year. Off-orchard income increased again in 2003 to \$29,793 because of other investments achieving satisfactory returns.

With increased Royal Gala and Cox production, the model orchard has increased export volume to 30,382 TCE in 2003 from 29,235 TCE in 2002. This was somewhat offset by lower production in pears and lower Braeburn export packouts. Production from younger trees is also starting to increase overall production.

Table 3: Average FAS Export Returns (\$/TCE)

Variety	2001 Final	2002 Final	2003 Final	2004 Grower Estimate
Braeburn	18.69	18.27	19.83	18.10
Cox	22.74	18.73	17.30	19.05
Royal Gala	23.19	19.82	20.79	21.29
Fuji	23.33	24.19	23.77	23.17
Other apples	24.00	23.00	16.67	22.75
Pears	33.00	39.08	39.03	36.02
Average Class 1	21.65	19.83	20.33	20.13

Expenditure

While gross orchard income in 2003 increased 1%, gross orchard expenditure (less interest) increased significantly to \$518,000, up 11% on 2002. Orchard expenditure represents \$12.65/total TCE harvested or \$17.06/export TCE.

In 2003, wage costs rose significantly to \$151,000 compared with \$122,000 in 2002. Thinning costs increased 31% to \$0.82/gross TCE due to poor chemical thinning results. Pruning costs also increased 27% due to increased wage demands arising from a shortage of skilled staff, and growers taking more time and care pruning their trees to a better standard than previously. Labour shortages continue to increase harvesting costs by 6% (\$1.50/gross TCE in 2003 compared with \$1.50/gross TCE in 2002). Other wage costs have also increased from \$0.42/gross TCE in 2002 to \$0.66/gross TCE in 2003 as growers are retaining key staff over quieter periods. There are two main reasons for this increase. One is that growers are very conscious that there are fewer skilled staff available and once they have employed valuable staff, they want to retain them. The other reason is that the improvement in profitability over the past two years has meant some of the jobs that had been previously deferred, are now being completed.

Total post harvest costs in 2003 (\$6.17/gross TCE) remain similar to 2002. The increase in crop volumes and continued competition amongst packhouses kept packing prices stable in 2003.

Operating costs increased 5% because of higher electricity prices at \$266/ha (up \$84/ha) and increased vehicle costs at \$904/ha (up from \$762/ha in 2002). Repairs and Maintenance, at \$816/ha in 2003, was similar to 2002, as growers continued to catch up on deferred maintenance from past years.

Administration costs increased 4% to \$2,243/ha in 2003. Of these, crop insurance decreased to \$607/ha in 2003 from \$658/ha in 2002 due to growers setting a spending limit on crop insurance and staying within it. (Some premiums increased from some insurers. However, these increases were partially offset by growers only taking the cover that matched their spending limits.)

Principal repayments are lower in 2003 at \$11,700 compared with \$42,000 in 2002 due to the lower surplus in 2003. Drawing and development expenses increased by 23% and 30% respectively. The increase in development costs is primarily because growers have had to pay deposits on trees that will be available for planting over the next few seasons. Nurseries now demand regular advance payments for trees prior to delivery because of a shortage of rootstocks and stronger commercial arrangements. GST is also charged when ordering trees.

Interest costs increased 20% during 2003 to \$25,000 because of the disposable deficit.

Net Result

The model orchard profitability decreased in 2003 with a smaller cash orchard surplus of \$100,000 in 2003 compared with a cash surplus of \$141,000 in 2002. This flowed through to a disposable deficit of \$14,000 in 2003 compared with a surplus of \$9,500 in 2002. However, once off-orchard income was included, a modest change in net cash change of \$15,000 was achieved. This compares with the larger profit of \$130,000 net cash change in 2002. No new borrowings were required in 2003 compared with the \$33,000 borrowed in 2002, which inflated the profit of \$129,000. It must also be remembered that the extraordinary profit in 2002 was attributed to the one-off sale of ENZA shares of \$69,000. The net trading profit after tax in 2003 was \$64,000, 43% lower than in 2002. As a result of this decrease, capital purchases declined to \$24,615 in 2003 compared with \$35,693 in 2002.

This is the second year in a row that there has been a positive net cash change in the model. Increased profitability has provided the opportunity for some orchardists to exit the industry. Those buying orchards have various reasons for doing so. Some purchases have been driven by orchardists expanding their operations, while others sold to take advantage of the higher land values inflated by strong demand for lifestyle blocks, and demand for land to plant into grapes. Average orchard size is expected to increase.

2004 Forecast

Revenue

Gross orchard revenue is forecast to increase 10% to \$715,000 in 2004. This model shows only a slight 1% price softening (\$20.13/TCE) for 2004. Some industry commentators consider that average returns will decrease further in 2004 due to the increased NZD/USD exchange rate. The larger Royal Gala fruit size anticipated in 2004 is expected to increase fruit returns. However, recent currency increases and the larger national crop, particularly in Braeburn, will place extreme pressure on market returns. Other difficulties such as lower fruit firmness going into harvest and higher disease levels on some blocks of Royal Gala may also impact on this expected increase in revenue.

Production is forecast to increase to 34,344 TCE in 2004, as all varieties have increased yield and higher packouts than in 2003.

Expenditure

Cash orchard expenditure is forecast to increase by 7% to \$553,000. The main increases are budgeted in the post-harvest costs of packing, packaging and coolstorage. Packaging costs have risen, and recent wage rate increases have now flowed through to increased packing costs. All other costs are forecast to remain similar to 2003, even though the stronger NZD should have flow-on benefits, particularly in chemicals and fuel prices.

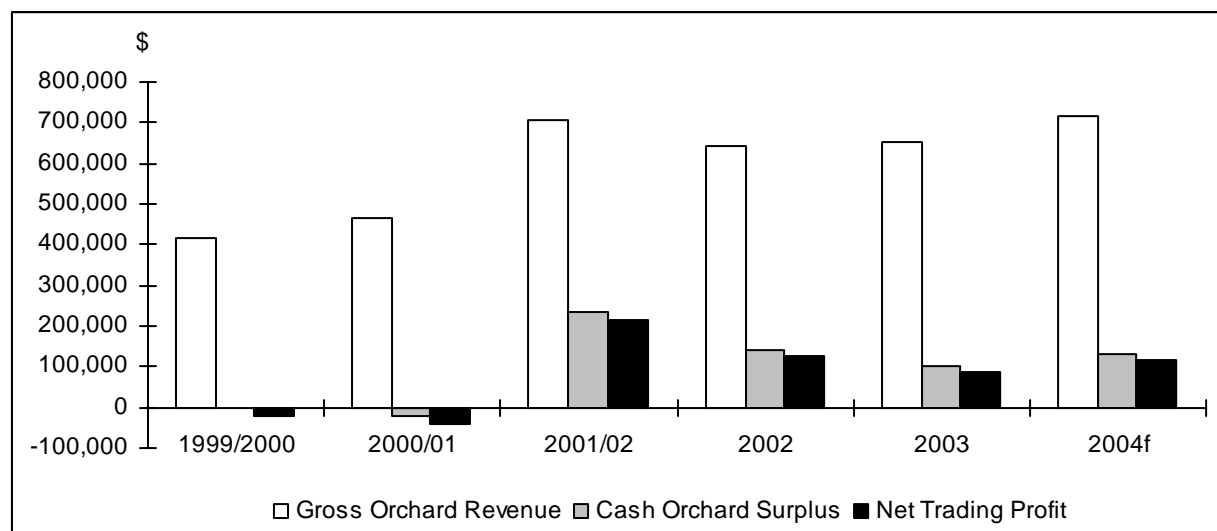
Principal repayment is forecast to be higher in 2004, at \$24,000, compared with \$12,000 in 2003 because most growers have a further opportunity to reduce debt levels. Tax is also budgeted to increase from \$21,000 in 2003 to \$29,000 in 2004. This assumes tax losses are no longer available because of regular and improved orchard profitability over the last three years.

Net Result

The forecast net trading profit after tax of \$87,000 is 34% higher than in 2003. This will allow growers to undertake some redevelopment and continue with term debt repayments. Overall, there is a net cash change of \$39,000, up \$23,000 on the previous year.

Equity for the model orchard has increased dramatically from \$744,000 in January 2003 to \$1,044,000 in January 2004. This is due mostly to an increase in land values and some debt repayment.

Nelson Pipfruit Profitability Trends



Issues and Trends

The second year of deregulation has proven somewhat better than most growers expected. Although Royal Gala returns were lower (mainly due to smaller fruit size), improved Braeburn returns (up \$1.14/export TCE) have resulted in another profitable year for growers. More than 60 exporters took the opportunity to export fruit from Nelson in 2003. ENZA is still the dominant exporter in Nelson, with 45% share of the crop. The volumes contracted to ENZA in 2004 are similar to 2003, but the number of suppliers has diminished. There was considerable dissatisfaction with the returns ENZA paid for approximately 80,000 TCE's of small Cox (150-180 count size) in 2003 (\$2.00/TCE).

Another five exporters shipped 30-40% of the crop and the balance was spread amongst the rest of the exporters. Some packhouse and coolstore operators exported small one-two container lots in 2002. In 2003 this business has grown, and many packhouse and coolstore operators are now exporting 20-30% of their own crops privately.

Nelson growers still favour using three exporters to market fruit in 2004 to spread risk. Most growers have remained with the same exporters they used in 2003. Only a few have dropped an exporter completely from their programme because of poor performance. One hundred and fifteen exporters are expected to sell New Zealand apples in 2004. With so many exporters, it is increasingly difficult to promote New Zealand as a brand. The industry is still working through ways to achieve this.

The strong NZD/USD exchange rate will affect returns more than most growers currently realise. Growers are hopeful the larger Royal Gala fruit size will go some way to offset this. However, freight costs have risen and more fruit is planned to be shipped to the UK and Europe this year because of the strength of the NZD/USD. When combined with the larger crop, pressure on reducing prices in the UK and Europe is inevitable. Grower returns are likely to decline more than growers estimate for this model.

Hail has not been the issue it was in 2002/03, with only one hailstorm affecting a few orchards in the Waimea area. From the 20 orchards surveyed in this model, 65% have some hail insurance. Recent

rain and cloudy weather over the three weeks leading up to harvest reduced fruit pressures going into harvest. Low fruit pressure means less crunch in the apple and crunch is an important selling point in the market. To improve storage and maintain fruit pressures, there has been significant uptake of new technology in the form of Smartfresh™ applications to treat apples. Smartfresh™ was trialed in Nelson in 2003 and proved successful.

The lack of skilled staff for supervisory and management positions is still a major weakness to the longer-term success of the pipfruit industry. Growers are finding it increasingly difficult to attract suitable staff to fill these roles. Two schemes are currently training approximately 70 cadets in Nelson and it is hoped that this will provide some key staff in the future.

Unemployment levels, particularly in the Motueka area, are the lowest they have been for many years. This has placed a strong reliance on overseas visitors to assist with harvesting and packing. To assist growers, government has decreased the turn around time for the issuing of work visas to three days, and this has been very beneficial to growers. Most orchards reported sufficient staff prior to the commencement of harvest in 2004. Many growers are spending on buildings or upgrading suitable accommodation to house workers over the harvest period. The escalation in house prices is making it difficult for staff to find accommodation at affordable prices.

Changes to the Holidays Act, to be introduced in April 2004, are causing widespread confusion amongst growers and post harvest operators. The main concern is in calculating entitlements for staff who work on public holidays. More education is required before growers will fully understand this new Act.

Leasing orchards is still a popular way for committed orchardists to increase their planted area. However, in 2004 many larger orchardists bought bare land either in the Motueka river area or the Waimea plains to develop new orchards. This expansion is being hindered by the unavailability of suitable dwarfing rootstocks. Land values have soared and there are very few new entrants coming into the industry. Many of the orchards sold recently have been bought by existing orchardists looking to expand.

The trend of orchardists on the hills either selling up and relocating to flat land or exiting the industry altogether is ongoing. The pressure of increased land values and housing developments will eventually see many orchards operating on the hills being sold.

Research and Development in the future is seen as a major concern to the long-term profitability of Nelson orchards. Many key experienced staff from HortResearch have left the industry and have often left the country. There appears to be a perception amongst growers that research is no longer being conducted for the long term good of the industry. The selling off of the tree-breeding programme is also not seen as being in the best interests of New Zealand growers. Research with a broader focus over a longer time frame is required. Many in the industry believe that this type of research is responsible for the position the New Zealand pipfruit industry has enjoyed over the past 50 years.

Nelson Pipfruit Budget

	2003				2004f			
	Whole orchard	\$ per planted ha	per TCE gross	per TCE export	Whole orchard	\$ per planted ha	per TCE gross	per TCE export
Revenue								
Gross pipfruit income	634,663	44,074	15.48	20.89	702,729	48,801	15.63	20.46
Other orchard income	16,690	1,159	0.41	0.55	12,350	858	0.27	0.36
Gross orchard revenue	651,353	45,233	15.89	21.44	715,079	49,658	15.90	20.82
Cash orchard expenditure	518,440	36,003	12.65	17.06	553,036	38,405	12.30	16.10
Interest	25,272	1,755	0.62	0.83	24,480	1,700	0.54	0.71
Rent and/or lease	7,157	497	0.17	0.24	7,401	514	0.16	0.22
Cash orchard surplus	100,484	6,978	2.45	3.31	130,162	9,039	2.89	3.79
Depreciation	15,120	1,050	0.37	0.50	14,717	1,022	0.33	0.43
Net trading profit	85,364	5,928	2.08	2.81	115,445	8,017	2.57	3.36
Taxation	20,878	1,450	0.51	0.69	28,878	2,005	0.64	0.84
Net trading profit after tax	64,486	4,478	1.57	2.12	86,567	6,012	1.93	2.52
Allocation of Funds								
Add back depreciation	15,120	1,050	0.37	0.50	14,717	1,022	0.33	0.43
Drawings	45,000	3,125	1.10	1.48	49,500	3,438	1.10	1.44
Principal repayments	11,700	813	0.29	0.39	23,880	1,658	0.53	0.70
Development	12,780	888	0.31	0.42	14,300	993	0.32	0.42
Capital purchases	24,615	1,709	0.60	0.81	9,705	674	0.22	0.28
Disposable surplus/deficit	-14,489	-1,006	-0.35	-0.48	3,899	271	0.09	0.11
Other Cash Sources								
Off-orchard income	29,793	2,069	0.73	0.98	35,000	2,431	0.78	1.02
Other cash income	0	0	0.00	0.00	0	0	0.00	0.00
Net cash change	15,304	1,063	0.37	0.50	38,899	2,701	0.87	1.13
Assets and Liabilities								
Land and building (opening)	971,985	67,499	23.71	31.99	1,259,115	87,439	28.00	36.66
Plant and machinery (opening)	70,170	4,873	1.71	2.31	79,140	5,496	1.76	2.30
Total orchard capital	1,042,155	72,372	25.43	34.30	1,338,255	92,934	29.76	38.97
Total debt opening	297,810	20,681	7.27	9.80	294,510	20,452	6.55	8.58
Equity (orchard assets-liabilities)	744,345	51,691	18.16	24.50	1,043,745	72,482	23.21	30.39

Nelson Pipfruit Budget

	2003				2004f			
	Whole orchard	\$ per planted ha	per TCE gross	per TCE export	Whole orchard	\$ per planted ha	per TCE gross	per TCE export
Orchard Working Expenses								
Wages								
Pruning	26,770	1,859	0.65	0.88	25,949	1,802	0.58	0.76
Thinning	33,624	2,335	0.82	1.11	27,302	1,896	0.61	0.79
Harvesting	61,603	4,278	1.50	2.03	68,213	4,737	1.52	1.99
Other	26,870	1,866	0.66	0.88	25,243	1,753	0.56	0.73
ACC	2,376	165	0.06	0.08	2,362	164	0.05	0.07
	151,243	10,503	3.69	4.98	149,069	10,352	3.32	4.34
Post-harvest costs								
Packing	93,448	6,489	2.28	3.08	109,640	7,614	2.44	3.19
Packaging	100,869	7,005	2.46	3.32	114,806	7,973	2.55	3.34
Coolstorage	52,164	3,623	1.27	1.72	64,100	4,451	1.43	1.87
Freight	6,559	455	0.16	0.22	7,125	495	0.16	0.21
	253,040	17,572	6.17	8.33	295,672	20,533	6.58	8.61
Operating costs								
Spray and chemicals	35,683	2,478	0.87	1.17	35,050	2,434	0.78	1.02
Pollination	1,728	120	0.04	0.06	1,685	117	0.04	0.05
Fertiliser	6,206	431	0.15	0.20	5,746	399	0.13	0.17
Electricity	3,830	266	0.09	0.13	3,902	271	0.09	0.11
Sundry expenses	6,264	435	0.15	0.21	5,918	411	0.13	0.17
Vehicles	13,018	904	0.32	0.43	11,578	804	0.26	0.34
Repairs and maintenance	11,750	816	0.29	0.39	10,757	747	0.24	0.31
	78,479	5,450	1.91	2.58	74,636	5,183	1.66	2.17
Administration and property expenses								
Communication	2,563	178	0.06	0.08	2,736	190	0.06	0.08
Rates	4,262	296	0.10	0.14	4,349	302	0.10	0.13
Accountancy, consultancy, legal	5,011	348	0.12	0.16	4,651	323	0.10	0.14
General insurance	6,552	455	0.16	0.22	4,061	282	0.09	0.12
Crop insurance	8,741	607	0.21	0.29	8,870	616	0.20	0.26
Levies and compliance	5,165	359	0.13	0.17	5,839	405	0.13	0.17
Other	3,384	235	0.08	0.11	3,154	219	0.07	0.09
	35,678	2,478	0.87	1.17	33,660	2,337	0.75	0.98
Cash orchard expenditure	518,440	36,003	12.65	17.06	553,036	38,405	12.30	16.10
Calculated Ratios								
Economic orchard surplus (or EBIT)	76,371	5,304	1.86	2.51	102,943	7,149	2.29	3.00
Cash orchard expenditure/GOR	80%				77%			
EOS/total orchard capital	7.3%				7.7%			
EOS less interest & lease/equity	5.9%				6.8%			
Interest+rent+lease/GOR	5.0%				4.5%			
EOS/GOR	11.7%				14.4%			
Economic orchard surplus (EOS) is calculated as follows: Gross revenue-cash orchard expenditure-depreciation-wages of management. Wages of management = \$31,000 + 1% of opening total orchard capital to a maximum of \$75,000								

Nelson Pipfruit Production and Income Details

	2003							
	Area (ha)	Yield/ha (TCE/ha)	Gross yield (TCE)	Export packout (%)	Total export cartons	Export return (\$/TCE)	Non export return (\$/TCE)	Revenue (\$)
Variety								
Braeburn	5.18	3,883	20,095	74	14,890	19.83	1.19	301,463
Royal Gala	5.25	2,588	13,587	82	11,135	20.79	1.46	235,068
Cox Orange	1.05	2,094	2,199	67	1,480	17.30	0.66	26,074
Fuji	0.83	2,517	2,077	66	1,366	23.77	1.00	33,174
Other apples	1.50	1,634	2,451	48	1,171	16.67	4.58	25,384
Pears	0.60	964	578	59	341	39.03	0.81	13,500
Vacant plantable area	0.60		0		0			0
Total area available for pipfruit	15.00		40,986	74	30,382	20.33	1.60	634,663

	2004f							
	Area (ha)	Yield/ha (TCE/ha)	Gross yield (TCE)	Export packout (%)	Total export cartons	Export return (\$/TCE)	Non export return (\$/TCE)	Revenue (\$)
Variety								
Braeburn	5.18	4,288	22,190	75	16,692	18.10	0.98	307,507
Royal Gala	5.25	2,749	14,432	83	11,950	21.29	0.77	256,325
Cox Orange	1.05	2,107	2,212	69	1,524	19.05	0.88	29,640
Fuji	0.83	3,394	2,800	67	1,881	23.17	0.81	44,316
Other apples	1.50	1,570	2,355	65	1,537	22.75	2.85	37,300
Pears	0.60	1,628	977	78	761	36.02	1.03	27,641
Vacant plantable area	0.60		0		0			0
Total area available for pipfruit	15.00		44,967	76	34,344	20.13	1.05	702,729